



Missouri Department of Natural Resources
Richland Creek - WBID 0884
Water Chemistry Data, 2001-2007

Org	Site	Site Name	Yr	Mo	Dy	Time	H	Flow	C	DO	pH	SC	NH3N	SO4	Cl
MoDNR	884/5.3	Richland Creek 7 mi.NNE of Stover	2001	9	25			2.33	14	9.9	7.9	370	0.02499		6
MoDNR	884/5.3	Richland Creek 7 mi.NNE of Stover	2005	12	5	1645		0.19	4.2	16.6		444	0.4	25	6
MoDNR	884/5.3	Richland Creek 7 mi.NNE of Stover	2006	3	15	1735		5.05	11.6	11.1	8.3	359	0.01499	28.7	6.4
MoDNR	884/5.3	Richland Creek 7 mi.NNE of Stover	2006	6	20	920		0.08	25.2	3.5	7.6	422	0.01499	16	5.2
MoDNR	884/5.3	Richland Creek 7 mi.NNE of Stover	2006	9	7	1015		0	19.6	3.3	7.6	425	0.03	19	5.6
MoDNR	884/5.3	Richland Creek 7 mi.NNE of Stover	2006	12	15	910		1.39	4.8	9.9	7.6	402	0.01499	48.6	10
MoDNR	884/5.3	Richland Creek 7 mi.NNE of Stover	2007	3	13	855		9.81	9.2	10	7.9	264	0.02	19	8
MoDNR	884/5.3	Richland Creek 7 mi.NNE of Stover	2007	6	11	930		5.53	20.4	6.4	7.4	300	0.01499	14	7
MoDNR	884/5.3	Richland Creek 7 mi.NNE of Stover	2007	10	1	1340		0.02	21.5	4.5	7.6	441	0.01499	20.8	7.5
MoDNR	884/5.3	Richland Creek 7 mi.NNE of Stover	2007	12	4	1320		0.06	8.7	11.8	8.1	424			7

The water quality standard for the protection of aquatic life for dissolved oxygen is 5mg/L. For dissolved oxygen, the Listing Methodology Document allows a water to be judged as impaired if measurements on 10 percent of the days monitored fail to meet the water quality standard. Three of 10 days exceeded the standard, or 30 percent. The binomial probability is .013. Since this probability is less than the minimum allowable type one error rate of 0.1, this water is judged to be **impaired** by low dissolved oxygen.

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Missouri Department of Natural Resources
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Aquatic Invertebrate Community Data, 2001

Org	Site	Site Name	Date	Score
MoDNR	884/5.3	Richland Creek 7 mi.NNE of Stover	Spring 2001	16
MoDNR	884/5.3	Richland Creek 7 mi.NNE of Stover	Spring 2001	14
MoDNR	884/5.5	Richland Creek	Fall 2001	20

The Missouri Department of Natural Resources collected and analyzed aquatic invertebrate samples. Staff followed the department's Environmental Services Program's written standard operating methods contained in "Semi-Quantitative M. Macroinvertebrate Stream Bioassessment" by R. Sarver, 2003. Invertebrate communities are judged to be impaired if the percent of sampling sites receiving a score of 16 or more is significantly less than for reference streams in the same ecological drainage unit. Scores of 16 or more are considered to reflect unimpaired macroinvertebrate communities.

Reference streams in this ecological drainage unit score 16 or higher on 82.6 percent of all glide/pool samples and 83.3 percent for all riffle/run samples. For Richland Creek, two of three samples, or 66.7 percent, received a score of 16 or higher.

The small size of the data set is inadequate for making a scientifically defensible decision regarding impairment. It is recommended that this stream receive **additional monitoring**.

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